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PATENT

Attorney Docket No. SYNGEN-06067

TECH CENTER 1600/2900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Ronald H. Chiarello *et al.*

Serial No.: 09/894,423

Group No.: 1636

Filed: 6/28/01

Examiner: Qian, C.

Entitled:
**Compositions and Methods for Labeling
Oligonucleotides**

**SUPPLEMENTAL INFORMATION DISCLOSURE
STATEMENT TRANSMITTAL**

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Alexandria, VA 22313-1450

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CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)

I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: January 9, 2004

By:

A handwritten signature of Christopher J. Collins.

Christopher J. Collins

Sir or Madam:

Enclosed please find an Information Disclosure Statement and Form PTO-1449, including copies of the references contained thereon, for filing in the U.S. Patent and Trademark Office.

A check for \$180.00 is also enclosed pursuant to 37 C.F.R. § 1.17(p) for filing this Information Disclosure Statement after three months as set forth in 37 C.F.R. § 1.97(c).

The Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. **08-1290**. An originally executed duplicate of this transmittal is enclosed for this purpose.

Dated: January 9, 2004

A handwritten signature of Thomas W. Brown.

Thomas W. Brown
Registration No. 50,002

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Dated: January 9, 2004

By:

Christopher J. Collins

Sir or Madam:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

Applicant has become aware of the following printed publications which he believes may be material to the examination of the instant application:

- U.S. Patent No. 4,415,732 to Caruthers *et al.*;
- U.S. Patent No. 4,500,707 to Caruthers *et al.*;
- U.S. Patent No. 4,668,777 to Caruthers *et al.*;
- U.S. Patent No. 4,683,195 to Mullis *et al.*;
- U.S. Patent No. 4,683,202 to Mullis *et al.*;
- U.S. Patent No. 4,973,679 to Caruthers *et al.*;
- U.S. Patent No. 5,218,103 to Caruthers *et al.*;
- U.S. Patent No. 5,278,302 to Caruthers *et al.*;

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- U.S. Patent No. 5,453,496 to Caruthers *et al.*;
- T. Maniatis *et al.*, *Molecular Cloning*, Cold Spring Harbor Laboratory, 188-190 (1982);
- R. J. Slater, "The Extraction and Fractionation of RNA," *In: Techniques in Molecular Biology*, J.M. Walker and W. Gaastra, eds., Macmillan, NY15, 113-120 (1983);
- P. Chomczynski and N. Sacchi, "Single-step Method of RNA Isolation by Acid Guanidinium Thiocyanate-Phenol-Chloroform Extraction," *Anal. Biochem.* 162:156-159 (1987);
- R.H. Alul *et al.*, "Oxaly-CPG: A Labile Support For Synthesis of Sensitive Oligonucleotide Derivatives," *Nucleic Acids Res.*, 19(7):1527 (1991);
- K.-P. Stengele and W. Pfleiderer, "Improved Synthesis of Oligodeoxyribonucleotides," *Tetrahed. Lett.*, 31(18):2549-2552 (1990);
- B.S. Sproat and D.M. Brown, "A New Linkage For Solid Phase Synthesis of Oligodeoxyribonucleotides," *Nucleic Acids Res.* 13:8, 2979-2987 (1985);
- Wallace *et al.*, "Application of Synthetic Oligonucleotides to the Diagnosis of Human Genetic Diseases," *Biochimie* 67:755-762 (1985);
- Studencki and Wallace, "Allele-Specific Hybridization Using Oligonucleotide Probes of Very High Specific Activity: Discrimination of the Human β^a - and β^s -Globin Genes," *DNA* 3(1): 7-15 (1984);
- Studencki *et al.*, "Discrimination Among the Human β^A , β^B , and β^C -Globin Genes Using Allele-Specific Oligonucleotide Hybridization Probes," *American Journal of Human Genetics* 37:42-51 (1985);
- Guide to Molecular Cloning Techniques, Ed. S.L. Berger and A.R. Kimmel, *Methods in Enzymology* 152:401 (1987);
- G. Alvarado-Urbina *et al.*, "Automated Synthesis of Gene Fragments," *Science* 214:270-274 (1981);

- Operating Manual, "cDNA Synthesis and Cloning," Pharmacia Biotech (1994)
- Catalog, "Nucleic Acid: purification, detection and labeling," Promega Corporation;
- Catalog, "Oligotex-dT mRNA Kits," Qiagen Corporation;
- Hansen and Braman, "Isolation of Pure RNA from Micro Amounts of Tissue or Cells in 30 Minutes," *Stratagen Cloning Systems*, 6:50;
- Catalog, "Nucleic Acid Isolation and Purification," U.S.B., pp.134-149;
- Catalog, "Probes & Genes," Novagen;
- G.M. Bonora *et al.*, "Structure of N-Tert-Butyloxycarbonyl-D-leucyl-L-phenylalanylethanolamide," *J. Biol. Chem.* 258:14725-14732 (1983);
- Sieber and Iselin, "Selective acidolytische Spaltung von Aralkyloxycarbonyl-Aminoschutzgruppen," *Helv. Chim. Acta* 51:614-622 (1968);
- V.K. Prasad *et al.*, "Solid-phase Reagents for the Isolation and Protection of Carbonyl Compounds," *J. Ster. Bioch.* 18:257-261 (1983);
- Kanda *et al.*, "New Potent Mitomycin Derivatives: Synthesis and Antitumor Activity of 7,7-(Ethylenedioxy)mitocins," *J. Med. Chem.* 35:2781-2786 (1992);
- A. Pilc *et al.*, "N-Ethoxycarbonyl-2-ethoxy-1,2-dihydroquinoline, An Irreversible Receptor Inactivator, as a Tool for Measurement of α -Adrenoceptor Occupancy In Vivo," *Eur. J. Pharm.* 212:109-111 (1992);
- J.W. Lown *et al.*, "Mechanism of Action of 2-Haloethylnitrosoureas on Deoxyribonucleic Acid," *Bioch. Pharm.* 34:1015-1024 (1985);
- G.K. Watson *et al.*, "Microbial Metabolism of the Pyridine Ring," *Biochem. J.* 146:157-172 (1975);
- E. Palomino *et al.*, "Synthesis and in Vitro Evaluation of Some Modified 4-Thiopyrimidine Nucleosides for Prevention or Reversal of AIDS-Associated Neurological Disorders," *J. Med. Chem.* 33:258-263 (1990);
- Heikkila and Chattopadhyaya, "The 9-Fluorenylmethoxycarbonyl (Fmoc) Group for the Protection of Amino Functions of Cytidine, Adenosine, Guanosine and Their 2'-Deoxysugar Derivatives," *Acta Chem. Scand.* B37:263-265 (1983);
- Webb *et al.*, "Hybridization triggered cross-linking of deoxyoligonucleotides," *Nucleic Acids Research* 14(19):7661-7674 (1986); and

PATENT
Attorney Docket No. SYNGEN-06067

- Beaucage and Caruthers, "Deoxynucleoside Phosphoramidites-A New Class of Key Intermediates for Deoxypolynucleotide Synthesis," *Tetrahed. Lett.*, 22(20):1859-1862 (1981).

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that anyone or more of these citations constitutes prior art.

Dated: January 9, 2004


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FORM PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.: SYNGEN-06067	Serial No.: 09/894,423
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (37 CFR § 1.98(b))		Applicant: Ronald H. Chiarello <i>et al.</i>	JAN 16 2004
		Filing Date: 6/28/01	TECH CENTER 1600/2900 Group Art Unit: 1636

U.S. PATENT DOCUMENTS

Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
	1	4,683,195	07/28/87	Mullis <i>et al.</i>	435	6	02/07/96
	2	4,683,202	07/28/87	Mullis <i>et al.</i>	435	91	10/25/85
	3	4,415,732	11/15/83	Caruthers <i>et al.</i>	536	27	03/27/81
	4	4,500,707	02/19/85	Caruthers <i>et al.</i>	536	27	03/16/82
	5	4,668,777	05/26/87	Caruthers <i>et al.</i>	536	27	08/06/84
	6	4,973,679	11/27/90	Caruthers <i>et al.</i>	536	27	09/18/86
	7	5,218,103	06/08/93	Caruthers <i>et al.</i>	536	25.33	01/22/91
	8	5,278,302	01/11/94	Caruthers <i>et al.</i>	536	24.5	11/18/91
	9	5,453,496	09/26/95	Caruthers <i>et al.</i>	536	24.5	10/15/93

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

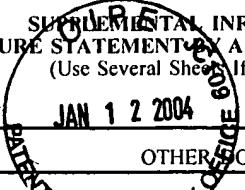
	10	T. Maniatis <i>et al.</i> , <i>Molecular Cloning</i> , Cold Spring Harbor Laboratory, 188-190 (1982)
	11	R. J. Slater, "The Extraction and Fractionation of RNA," In: <i>Techniques in Molecular Biology</i> , J.M. Walker and W. Gaastra, eds., Macmillan, NY15, 113-120 (1983)
	12	P. Chomczynski and N. Sacchi, "Single-step Method of RNA Isolation by Acid Guanidium Thiocyanate-Phenol-Chloroform Extraction," <i>Anal. Biochem.</i> 162:156-159 (1987)
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	14	K.-P. Stengele and W. Pfleiderer, "Improved Synthesis of Oligodeoxyribonucleotides," <i>Tetrahed. Lett.</i> , 31(18):2549-2552 (1990)
*	15	B.S. Sproat and D.M. Brown, "A New Linkage For Solid Phase Synthesis of Oligodeoxyribonucleotides," <i>Nucleic Acids Res.</i> 13:8, 2979-2987 (1985)
	16	Wallace <i>et al.</i> , "Application of Synthetic Oligonucleotides to the Diagnosis of Human Genetic Diseases," <i>Biochimie</i> 67:755-762 (1985)
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	18	Studencki <i>et al.</i> , "Discrimination Among the Human β^A , β^S , and β^C -Globin Genes Using Allele-Specific Oligonucleotide Hybridization Probes," <i>American Journal of Human Genetics</i> 37:42-51 (1985)
	19	Guide to Molecular Cloning Techniques, Ed. S.L. Berger and A.R. Kimmel, <i>Methods in Enzymology</i> 152:401 (1987)
	20	G. Alvarado-Urbina <i>et al.</i> , "Automated Synthesis of Gene Fragments," <i>Science</i> 214:270-274 (1981)
	21	Operating Manual, "cDNA Synthesis and Cloning," Pharmacia Biotech (1994)
	22	Catalog, "Nucleic Acid: purification, detection and labeling," Promega Corporation
	23	Catalog, "Oligotex-dT mRNA Kits," Qiagen Corporation.
	24	Hansen and Braman, "Isolation of Pure RNA from Micro Amounts of Tissue or Cells in 30 Minutes," <i>Stratagen Cloning Systems</i> , 6:50
	25	Catalog, "Nucleic Acid Isolation and Purification," U.S.B., pp.134-149

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EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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26	Catalog, "Proteins & Genes," Novagen			
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28	Sieber and Iselin, "Selective acidolytische Spaltung von Aralkyloxycarbonyl-Aminoschutzgruppen," <i>Helv. Chim. Acta</i> 51:614-622 (1968)			
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30	Kanda <i>et al.</i> , "New Potent Mitomycin Derivatives: Synthesis and Antitumor Activity of 7,7-(Ethylenedioxy)mitocins," <i>J. Med. Chem.</i> 35:2781-2786.			
31	A. Pilc <i>et al.</i> , "N-Ethoxycarbonyl-2-ethoxy-1,2-dihydroquinoline, An Irreversible Receptor Inactivator, as a Tool for Measurement of α -Adrenoceptor Occupancy In Vivo," <i>Eur. J. Pharm.</i> 212:109-111 (1992)			
32	J.W. Lown <i>et al.</i> , "Mechanism of Action of 2-Haloethylnitrosoureas on Deoxyribonucleic Acid," <i>Bioch. Pharm.</i> 34:1015-1024 (1985)			
33	G.K. Watson <i>et al.</i> , "Microbial Metabolism of the Pyridine Ring," <i>Biochem. J.</i> 146:157-172 (1975)			
34	E. Palomino <i>et al.</i> , "Synthesis and in Vitro Evaluation of Some Modified 4-Thiopyrimidine Nucleosides for Prevention or Reversal of AIDS-Associated Neurological Disorders," <i>J. Med. Chem.</i> 33:258-263 (1990)			
35	Heikkila and Chattopadhyaya, "The 9-Fluorenylmethoxycarbonyl (Fmoc) Group for the Protection of Amino Functions of Cytidine, Adenosine, Guanosine and Their 2'-Deoxysugar Derivatives," <i>Acta Chem. Scand.</i> B37:263-265 (1983)			
36	Webb and Matteucci, "Hybridization triggered cross-linking of deoxyoligonucleotides," <i>Nucleic Acids Research</i> 14(19):7661-7674 (1986)			
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